



Substitute Sequence Listing ascii txt.txt

<110> APPLICANT: TEDESCO, Francesco  
MARZARI, Roberto

<120> TITLE OF INVENTION: Antibodies anti C5 of the complement and their use

<130> FILE REFERENCE: 50294/016001

<140> CURRENT APPLICATION NUMBER: US/10/521,109

<141> CURRENT FILING DATE: 2005-01-11

<150> PRIOR APPLICATION NUMBER: PCT/EP2003/007487

<151> PRIOR FILING DATE: 2003-07-10

<150> PRIOR APPLICATION NUMBER: MI2002A001527

<151> PRIOR FILING DATE: 2002-07-11

<160> NUMBER OF SEQ ID NOS: 35

<170> SOFTWARE: PatentIn version 3.1

<210> SEQ ID NO 1

<211> LENGTH: 342

<212> TYPE: DNA

<213> ORGANISM: Homo sapiens

<220> FEATURE:

<221> NAME/KEY: CDS

<222> LOCATION: (1)..(342)

<223> OTHER INFORMATION: Light chain of the TS-A12/22 antibody

<400> SEQUENCE: 1

gac atc cgg atg acc cag tct cca gac tcc ctg gct gtg tct ctg ggc	48
Asp Ile Arg Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly	
1 5 10 15	
gag agg gcc acc atc aac tgc aag tcc agc cag agt gtt tta tac agc	96
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser	
20 25 30	
tcc aac aat aag aac tac tta gct tgg tac cag cag aaa cca gga cag	144
Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln	
35 40 45	
cct cct aag ctg ctc att tac tgg gca tct acc cgg gaa tcc ggg gtc	192
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val	
50 55 60	
cct gac cga ttc agt ggc agc ggg tct ggg aca gat ttc act ctc acc	240
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr	
65 70 75 80	
atc agc agc ctg cag gct gaa gat gtg gca gtt tat tac tgt cag caa	288
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln	
85 90 95	
tat tat agt act cct cag ctc act ttc ggc gga agg acc aaa gtg gat	336
Tyr Tyr Ser Thr Pro Gln Leu Thr Phe Gly Gly Arg Thr Lys Val Asp	
100 105 110	
atc aaa	342
Ile Lys	

<210> SEQ ID NO 2

<211> LENGTH: 114

<212> TYPE: PRT

<213> ORGANISM: Homo sapiens

<400> SEQUENCE: 2

Asp Ile Arg Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly

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1      5      10      15
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
20      25      30
Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35      40      45
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50      55      60
Pro Asp Arg Phe Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65      70      75      80
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85      90      95
Tyr Tyr Ser Thr Pro Gln Leu Thr Phe Gly Gly Arg Thr Lys Val Asp
100      105      110
Ile Lys

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<210> SEQ ID NO 3
<211> LENGTH: 345
<212> TYPE: DNA
<213> ORGANISM: Homo sapiens
<220> FEATURE:
<221> NAME/KEY: CDS
<222> LOCATION: (1)..(345)
<223> OTHER INFORMATION: Heavy chain of the TS-A12/22 antibody
<400> SEQUENCE: 3
cag gta cag ctg cag cag tca gag gga ggc gtg gtc cag cct ggg agg      48
Gln Val Gln Leu Gln Gln Ser Glu Gly Gly Val Val Gln Pro Gly Arg
1      5      10      15
tcc ctg aga ctc tcc tgt gca gcg tct gga ttc acc ttc agt agc tat      96
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20      25      30
ggc atg aac tgg gtc cgc cag gct cca ggg aag ggg ctg gag tgg gtt      144
Gly Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35      40      45
tca tac att agt agt agt agt agt acc ata tac tac gca gac tct gtg      192
Ser Tyr Ile Ser Ser Ser Ser Ser Thr Ile Tyr Tyr Ala Asp Ser Val
50      55      60
aag ggc cga ttc acc atc tcc aga gac aat tcc aag aac acg ctg tat      240
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65      70      75      80
ctg caa atg aac agc ctg aga gcc gag gac acg gct gtg tat tac tgt      288
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85      90      95
gcg aga ggg cct ggt atg gac gtc tgg ggc caa ggg acc acg gtc acc      336
Ala Arg Gly Pro Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100      105      110
gtc tcc tca
Val Ser Ser
115

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<210> SEQ ID NO 4
<211> LENGTH: 115
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 4
Gln Val Gln Leu Gln Gln Ser Glu Gly Gly Val Val Gln Pro Gly Arg
1      5      10      15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20      25      30
Gly Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35      40      45
Ser Tyr Ile Ser Ser Ser Ser Ser Thr Ile Tyr Tyr Ala Asp Ser Val

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      50      55      60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65      70      75      80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
      85      90      95
Ala Arg Gly Pro Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr
100      105      110
Val Ser Ser
115

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<210> SEQ ID NO 5  
 <211> LENGTH: 750  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: CDS  
 <222> LOCATION: (1)..(750)  
 <223> OTHER INFORMATION: scFv  
 <400> SEQUENCE: 5

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gac atc cgg atg acc cag tct cca gac tcc ctg gct gtg tct ctg ggc      48
Asp Ile Arg Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1      5      10
gag agg gcc acc atc aac tgc aag tcc agc cag agt gtt tta tac agc      96
Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
20
tcc aac aat aag aac tac tta gct tgg tac cag cag aaa cca gga cag      144
Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35      40      45
cct cct aag ctg ctc att tac tgg gca tct acc cgg gaa tcc ggg gtc      192
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50      55      60
cct gac cga ttc agt ggc agc ggg tct ggg aca gat ttc act ctc acc      240
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65      70      75      80
atc agc agc ctg cag gct gaa gat gtg gca gtt tat tac tgt cag caa      288
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85
tat tat agt act cct cag ctc act ttc ggc gga agg acc aaa gtg gat      336
Tyr Tyr Ser Thr Pro Gln Leu Thr Phe Gly Gly Arg Thr Lys Val Asp
100      105      110
atc aaa tcc gga ggg tcg acc ata act tcg tat aat gta tac tat acg      384
Ile Lys Ser Gly Gly Ser Thr Ile Thr Ser Tyr Asn Val Tyr Tyr Thr
115      120      125
aag tta tcc tcg agc ggt acc cag gta cag ctg cag cag tca gag gga      432
Lys Leu Ser Ser Ser Gly Thr Gln Val Gln Leu Gln Gln Ser Glu Gly
130      135      140
ggc gtg gtc cag cct ggg agg tcc ctg aga ctc tcc tgt gca gcg tct      480
Gly Val Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser
145      150      155      160
gga ttc acc ttc agt agc tat ggc atg aac tgg gtc cgc cag gct cca      528
Gly Phe Thr Phe Ser Ser Tyr Gly Met Asn Trp Val Arg Gln Ala Pro
165      170      175
ggg aag ggg ctg gag tgg gtt tca tac att agt agt agt agt agt acc      576
Gly Lys Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Ser Ser Ser Thr
180      185      190      195
ata tac tac gca gac tct gtg aag ggc cga ttc acc atc tcc aga gac      624
Ile Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
200      205      210      215
aat tcc aag aac acg ctg tat ctg caa atg aac agc ctg aga gcc gag      672
Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
220
gac acg gct gtg tat tac tgt gcg aga ggg cct ggt atg gac gtc tgg      720

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Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Gly	Pro	Gly	Met	Asp	Val	Trp
225				230						235					240
ggc	caa	ggg	acc	acg	gtc	acc	gtc	tcc	tca						
Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser						
				245					250						

750

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<210> SEQ ID NO 6
<211> LENGTH: 250
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 6
Asp Ile Arg Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1      5      10      15
Glu Arg Ala Thr Ile Asn Cys Lys Ser Gln Ser Val Leu Tyr Ser
20      25      30
Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35      40      45
Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50      55      60
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65      70      75      80
Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85      90      95
Tyr Tyr Ser Thr Pro Gln Leu Thr Phe Gly Gly Arg Thr Lys Val Asp
100     105     110
Ile Lys Ser Gly Gly Ser Thr Ile Thr Ser Tyr Asn Val Tyr Tyr Thr
115     120     125
Lys Leu Ser Ser Ser Gly Thr Gln Val Gln Leu Gln Gln Ser Glu Gly
130     135     140
Gly Val Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser
145     150     155     160
Gly Phe Thr Phe Ser Tyr Gly Met Asn Trp Val Arg Gln Ala Pro
165     170     175
Gly Lys Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Ser Ser Ser Thr
180     185     190
Ile Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
195     200     205
Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
210     215     220
Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Pro Gly Met Asp Val Trp
225     230     235     240
Gly Gln Gly Thr Thr Val Thr Val Ser Ser
245     250

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<210> SEQ ID NO 7
<211> LENGTH: 15
<212> TYPE: DNA
<213> ORGANISM: homo sapiens
<220> FEATURE:
<221> NAME/KEY: CDS
<222> LOCATION: (1)..(15)
<223> OTHER INFORMATION: CDR1 region of VH
<400> SEQUENCE: 7
agc tat ggc atg aac
1      5
Ser Tyr Gly Met Asn

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15

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<210> SEQ ID NO 8
<211> LENGTH: 5
<212> TYPE: PRT

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<213> ORGANISM: homo sapiens

<400> SEQUENCE: 8

Ser Tyr Gly Met Asn  
1 5

<210> SEQ ID NO 9

<211> LENGTH: 51

<212> TYPE: DNA

<213> ORGANISM: homo sapiens

<220> FEATURE:

<221> NAME/KEY: CDS

<222> LOCATION: (1)..(51)

<223> OTHER INFORMATION: CDR2 region of VH

<400> SEQUENCE: 9

tac att agt agt agt agt acc ata tac tac gca gac tct gtg aag 48  
Tyr Ile Ser Ser Ser Ser Ser Thr Ile Tyr Tyr Ala Asp Ser Val Lys  
1 5 10 15  
ggc 51  
Gly

<210> SEQ ID NO 10

<211> LENGTH: 17

<212> TYPE: PRT

<213> ORGANISM: homo sapiens

<400> SEQUENCE: 10

Tyr Ile Ser Ser Ser Ser Ser Thr Ile Tyr Tyr Ala Asp Ser Val Lys  
1 5 10 15  
Gly

<210> SEQ ID NO 11

<211> LENGTH: 18

<212> TYPE: DNA

<213> ORGANISM: Homo sapiens

<220> FEATURE:

<221> NAME/KEY: CDS

<222> LOCATION: (1)..(18)

<223> OTHER INFORMATION: CDR3 region of VH

<400> SEQUENCE: 11

ggg cct ggt atg gac gtc 18  
Gly Pro Gly Met Asp Val  
1 5

<210> SEQ ID NO 12

<211> LENGTH: 6

<212> TYPE: PRT

<213> ORGANISM: Homo sapiens

<400> SEQUENCE: 12

Gly Pro Gly Met Asp Val  
1 5

<210> SEQ ID NO 13

<211> LENGTH: 63

<212> TYPE: DNA

<213> ORGANISM: artificial sequence

<220> FEATURE:

<223> OTHER INFORMATION: linker

<220> FEATURE:

<221> NAME/KEY: CDS

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<222> LOCATION: (1)..(63)  
 <223> OTHER INFORMATION: linker VL-VH  
 <400> SEQUENCE: 13  
 tcc gga ggg tcg acc ata act tcg tat aat gta tac tat acg aag tta 48  
 Ser Gly Gly Ser Thr Ile Thr Ser Tyr Asn Val Tyr Tyr Thr Lys Leu  
 1 5 10 15  
 tcc tcg agc ggt acc 63  
 Ser Ser Ser Gly Thr  
 20

<210> SEQ ID NO 14  
 <211> LENGTH: 21  
 <212> TYPE: PRT  
 <213> ORGANISM: artificial sequence  
 <220> FEATURE:  
 <223> OTHER INFORMATION: linker  
 <400> SEQUENCE: 14  
 Ser Gly Gly Ser Thr Ile Thr Ser Tyr Asn Val Tyr Tyr Thr Lys Leu  
 1 5 10 15  
 Ser Ser Ser Gly Thr  
 20

<210> SEQ ID NO 15  
 <211> LENGTH: 18  
 <212> TYPE: PRT  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: MISC\_FEATURE  
 <223> OTHER INFORMATION: Peptide comprising cleavage site of C5 convertase.  
 Corresponding  
 to aa 727-744 of mature human protein (P01031).  
 <400> SEQUENCE: 15  
 Lys Asp Met Gln Leu Gly Arg Leu His Met Lys Thr Leu Leu Pro Val  
 1 5 10 15  
 Ser Lys

<210> SEQ ID NO 16  
 <211> LENGTH: 20  
 <212> TYPE: PRT  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: PEPTIDE  
 <222> LOCATION: (1)..(20)  
 <223> OTHER INFORMATION: fibronectin derived peptide  
 <400> SEQUENCE: 16  
 Gly Glu Glu Ile Gln Ile Gly His Ile Pro Arg Glu Asp Val Asp Tyr  
 1 5 10 15  
 His Leu Tyr Pro  
 20

<210> SEQ ID NO 17  
 <211> LENGTH: 34  
 <212> TYPE: DNA  
 <213> ORGANISM: Artificial sequence /primer  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(34)  
 <223> OTHER INFORMATION: PCR primer  
 <400> SEQUENCE: 17  
 atccgagtgc acacctgtgg agagaaaggc aaag  
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<210> SEQ ID NO 18  
 <211> LENGTH: 34  
 <212> TYPE: DNA  
 <213> ORGANISM: Artificial sequence /primer  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(34)  
 <223> OTHER INFORMATION: PCR primer  
 <400> SEQUENCE: 18  
 tcctcagcgc gcggctctgg tggcagaccg aagg 34

<210> SEQ ID NO 19  
 <211> LENGTH: 33  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(33)  
 <223> OTHER INFORMATION: Sequence derived from AF237583 GenBank acc. number  
 <400> SEQUENCE: 19  
 caggcggcgc gcgggcagcc ccaggaacca cag 33

<210> SEQ ID NO 20  
 <211> LENGTH: 94  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(94)  
 <223> OTHER INFORMATION: Sequence derived from AF237583 GenBank acc. number  
 <400> SEQUENCE: 20  
 acgtcgatcg cctgctgaat tcttaagtac tatccaggcc cagcagtggg tttgggattg 60  
 gtttgccact agttttaccc ggggacaggg agag 94

<210> SEQ ID NO 21  
 <211> LENGTH: 41  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(41)  
 <223> OTHER INFORMATION: Sequence derived from AF237583 GenBank acc. number  
 <400> SEQUENCE: 21  
 aggcggcgcg cgacaaaact cacacatgcc caccgtgccc a 41

<210> SEQ ID NO 22  
 <211> LENGTH: 33  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(33)  
 <223> OTHER INFORMATION: Sequence derived from J00220 GenBank acc. number  
 <400> SEQUENCE: 22  
 caggcggcgc gcgttcctc aactccacct acc 33

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<210> SEQ ID NO 23  
 <211> LENGTH: 32  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(32)  
 <223> OTHER INFORMATION: Sequence derived from J00220 GenBank acc. number  
 <400> SEQUENCE: 23  
 ccgctactag ttttaccgcg caagcggtcg at 32

<210> SEQ ID NO 24  
 <211> LENGTH: 31  
 <212> TYPE: DNA  
 <213> ORGANISM: Mus musculus  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(31)  
 <223> OTHER INFORMATION: Sequence derived from L27437 GenBank acc. number  
 <400> SEQUENCE: 24  
 caggcggcgc gcggcagacc gaaggctcca c 31

<210> SEQ ID NO 25  
 <211> LENGTH: 32  
 <212> TYPE: DNA  
 <213> ORGANISM: Mus musculus  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(32)  
 <223> OTHER INFORMATION: Sequence derived from J00220 GenBank acc. number  
 <400> SEQUENCE: 25  
 ccgctactag ttttaccagg agagtgggag ag 32

<210> SEQ ID NO 26  
 <211> LENGTH: 36  
 <212> TYPE: DNA  
 <213> ORGANISM: Mus musculus  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(36)  
 <223> OTHER INFORMATION: Sequence derived from L27437 GenBank acc. number  
 <400> SEQUENCE: 26  
 caggcggcgc gcggttgtaa gccttgcata tgtaca 36

<210> SEQ ID NO 27  
 <211> LENGTH: 33  
 <212> TYPE: DNA  
 <213> ORGANISM: Rattus norvegicus  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(33)  
 <223> OTHER INFORMATION: Sequence derived from M28671 GenBank acc. number  
 <400> SEQUENCE: 27  
 caggcggcgc gcgggctagt cagaaaacca cag 33

<210> SEQ ID NO 28  
 <211> LENGTH: 33  
 <212> TYPE: DNA

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<213> ORGANISM: Rattus norvegicus  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(33)  
 <223> OTHER INFORMATION: Sequence derived from M28671 GenBank acc. number  
 <400> SEQUENCE: 28  
 ccgctactag ttttaccgag aggccgggag atg 33

<210> SEQ ID NO 29  
 <211> LENGTH: 33  
 <212> TYPE: DNA  
 <213> ORGANISM: Rattus norvegicus  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(33)  
 <223> OTHER INFORMATION: Sequence derived from M28671 GenBank acc. number  
 <400> SEQUENCE: 29  
 caggcggcgc gccacaaatg ccctacatgc cct 33

<210> SEQ ID NO 30  
 <211> LENGTH: 35  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(35)  
 <223> OTHER INFORMATION: Universal oligonucleotide for VL1 amplification.  
 <400> SEQUENCE: 30  
 caggtgtgca ctcggacatc crgdtgaccc agtct 35

<210> SEQ ID NO 31  
 <211> LENGTH: 35  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(35)  
 <223> OTHER INFORMATION: nucleotide in position 29 is "n"  
 Universal oligonucleotide for VL2 amplification.  
 <400> SEQUENCE: 31  
 caggtgtgca ctcggatatt gtgwtgacac agwct 35

<210> SEQ ID NO 32  
 <211> LENGTH: 31  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(31)  
 <223> OTHER INFORMATION: Universal oligonucleotide for VL3 amplification.  
 <400> SEQUENCE: 32  
 caggtgtgca ctcgcagcct gtgctgcary c 31

<210> SEQ ID NO 33  
 <211> LENGTH: 35  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:

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<221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(35)  
 <223> OTHER INFORMATION: Universal oligonucleotide for VL4 amplification.  
 <400> SEQUENCE: 33  
 caggtgtgca ctcgtcctat gwgctgacwc agcca 35

<210> SEQ ID NO 34  
 <211> LENGTH: 29  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(29)  
 <223> OTHER INFORMATION: Universal oligonucleotide for JH1 amplification.  
 <400> SEQUENCE: 34  
 gacccgcgcg cggagacrgt gaccaggggt 29

<210> SEQ ID NO 35  
 <211> LENGTH: 29  
 <212> TYPE: DNA  
 <213> ORGANISM: Homo sapiens  
 <220> FEATURE:  
 <221> NAME/KEY: misc\_feature  
 <222> LOCATION: (1)..(29)  
 <223> OTHER INFORMATION: Universal oligonucleotide for JH2 amplification.  
 <400> SEQUENCE: 35  
 gacccgcgcg cagagacggt gaccrtkgt 29

<210> SEQ ID NO 36  
 <211> LENGTH: 5  
 <212> TYPE: PRT  
 <213> ORGANISM: Homo sapiens  
 <400> SEQUENCE: 36  
 Lys Ser Ser Lys Cys  
 1 5

<210> SEQ ID NO 37  
 <211> LENGTH: 6  
 <212> TYPE: PRT  
 <213> ORGANISM: Homo sapiens  
 <400> SEQUENCE: 37  
 Leu Gly Arg Leu His Met  
 1 5